January 22, 1988

Mr. Dan Mroz
Missouri Department of Natural Resources
Division of Environmental Quality
P.O. Box 176
Jefferson City, Missouri 65102

Re: Hussmann SECO
Lagoon and Drum Storage Closure

Dear Mr. Mroz:

The electropolishing lagoon and drum storage area have been closed in accordance with the Closure Plan dated May 1986 as amended by the following:

- December 1, 1986 Letter from Reed & Associates to Dan Mroz, Missouri DNR
- January 5, 1987 Letter from Reed & Associates to Dan Mroz, Missouri DNR
- July 31 Letter from Dan Mroz, Missouri DNR to Hussmann SECO. Attached is the Closure Report.

Attached is a report describing the closure activities.

Very truly yours,

REED & ASSOCIATES, INC.

James P. Naismith, P.E.

STATE OF MISSOURI
JAMES P. NAISMITH
NUMBER E-21969
REGISTERED PROFESSIONAL ENGINEER
1-26-88

VSR:vjr

cc: Mr. Morris Kay
Regional Administrator
EPA Region VII

HUSSMANN CORPORATION

Robert Miller, Manager
Hazardous Materials and
Environmental Protection

CLOSURE REPORT
HUSSMANN-SECO
ELECTROPOLISHING LAGOON
AND DRUM STORAGE AREA

Prepared For

HUSSMANN CORPORATION

REED & ASSOCIATES, INC.

Midland Corpus Christi Austin

CLOSURE REPORT
HUSSMANN-SECO
ELECTROPOLISHING LAGOON
AND DRUM STORAGE AREA

Prepared For

HUSSMANN CORPORATION

By

REED & ASSOCIATES, INC.
Hydrologists & Environmental Consultants
Midland - Corpus Christi - Austin, Texas

January 22, 1988

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CLOSURE REPORT
HUSSMANN-SECO
ELECTROPOLISHING LAGOON
AND DRUM STORAGE AREA

INTRODUCTION

This report describes the closure of the former electropolishing waste lagoon and drum storage area at the Hussmann Corporation-SECO Products facility in Washington, Missouri. The lagoon was operated from 1976 to 1983 to collect electropolishing waste fluids containing spent acids and dissolved metals. In addition, a reported inadvertent spill of trichloroethylene (TCE) into the lagoon occurred in the recent past. A concrete slab area behind the plant, which was used to store TCE in drums, was also closed following work on the lagoon.

Following discussions between Hussmann personnel, the Missouri Department of Natural Resources (DNR) and the U.S. Environmental Protection Agency (EPA), a closure plan was finalized to formally close the lagoon and drum storage area. The reference documents which constitute the approved closure plan include:

1. Closure Plan Electropolishing Lagoon and Drum Storage Area, May 1986
2. Letter from V. Steve Reed (Reed & Associates) to Dan Mroz (DNR), December 1, 1986

3. Letter from V. Steve Reed (Reed & Associates) to Dan Mroz (DNR), January 5, 1987

4. Letter from Frederick A. Brunner (DNR) to Robert Miller (Hussmann Corp.), July 31, 1987

METHODOLOGY

Closure activities were performed by Hussmann with site supervision by Reed & Associates, Inc. The excavation, transport, and disposal of lagoon sludge and soil were performed by Chemical Waste Management, Inc's ENRAC Division. Backfilling, compaction, seeding and fencing were also done by ENRAC.

Excavation and loading of sludge and soils were done with a Caterpillar 963 tracked front-end loader and a Caterpillar 215 tracked backhoe. This equipment was also used for backfilling. A Caterpillar CP-323 vibrating sheepsfoot compactor was used to compact the soils during backfilling.

Grade and horizontal control during excavation and backfilling were maintained with a standard transit and level. Samples of the underlying bottom soils for intermediate or final verification analyses were collected with six-inch long, two-inch diameter, steel Shelby tubes which were pre-cleaned and rinsed. Tubes were manually driven three to five inches and removed to sample and then capped and sealed with tape. Composite

verification samples of the side walls were collected from two points along the exposed dike wall and homogenized in a pre-cleaned stainless steel pan. A sample of the mixed soil was placed in a six-inch Shelby tube, capped and sealed. After collection and tagging, soil samples were stored in coolers. The sample coolers were delivered to the laboratory the same day.

Samples were analyzed by metaTRACE, Inc. in Earth City, Missouri, using either EPA method 8010 or 8240. Final verification samples were also analyzed for total and EP toxicity levels of chromium, copper, and nickel as well as soil pH. Additional testing during the field program included four initial paint filter tests of the lagoon sludge/soil (EPA method 9095). During the backfilling, several in situ soil compaction tests were performed by ANCO Testing Laboratory, Inc. using a nuclear densitometer.

FIELD PROGRAM

Dewatering

Closure preparation began with a final dewatering of the lagoon by Hussmann personnel on July 7 and 8, 1987. The remainder of the summer was dry and no accumulation of rain water occurred in the lagoon. After DNR approval of the closure plan, the lagoon was temporarily lined with Visqueen polyethylene sheeting to keep the sludge dry prior to excavation.

Excavation and Sampling

Field activity commenced on October 12, 1987. The first two days were spent setting up and preparing marshalling and loading areas for the trucks. The four inner corners of the top of the lagoon dike were surveyed by a certified surveyor to designate the area of lagoon wastes. Reed & Associates surveyed for excavation control and sampling locations during the project. Inside lagoon bottom corners were located and the top of dike inside corners were surveyed for final fence corner locations. Additional spot locations on the lagoon bottom were surveyed to determine starting elevations to control excavation depths. The maximum high water level was marked by stakes on the inside dike slope.

On October 13, 1987, four paint filter tests (EPA method 9095) were performed on composites of the upper three to five inches of lagoon bottom sludge and soil. One composite was collected from near the middle of each quadrant. No free liquid was noted during the tests.

Excavation of the sludge and soils began on October 14, 1987. Initially, 2.5 feet of soil from the lagoon bottom and one foot of the inside dike below the high water level were removed. Periodic grade checks were made with the transit/level to control the bottom excavation and the side depth was checked using a rod and tape measure.

After excavation of the initial 2.5 feet of sludge and soil from the bottom and one foot from the side of the dike, a 60- by 60-foot area in the southwest corner was divided into nine 20- by 20-foot areas for intermediate verification sampling. The intermediate verification samples were collected in the middle of each area and analyzed for TCE.

Based on the results of the intermediate sample analyses, five of the nine 20- by 20-foot sections in the southwest portion of the lagoon were excavated an additional 2.5 feet or a total of five feet below the original lagoon bottom. The areas excavated and total depth of excavation are shown on Figure 1. A five-foot deep test hole was excavated, in lieu of a soil boring, at the location of the intermediate sample containing the highest concentration of TCE. Three samples were collected from the sidewall of the test hole.

Final verification samples were collected at five locations on the overall lagoon bottom. One sample from each quadrant and one sample near the middle were collected by driving six-inch long Shelby tubes about four inches into the undisturbed soils. Each wall sample was collected by compositing the soil from two locations about midway between the bottom and high water level of the dike after the inner foot of soils had been removed. The soils were collected with a pre-cleaned trowel and mixed in a

clean stainless steel container. A six-inch Shelby tube was then packed with the composite sample.

The final excavation limits are shown on Figure 1. From October 14 to October 22, 1987, a total of 1,770 tons (86 truck loads) of sludge and soils were excavated, transported and disposed of by Chemical Waste Management, Inc. at their Adams Center Landfill near Fort Wayne, Indiana.

Backfilling

Fill material was obtained from the existing dikes. The dike soil was brown to light brown, silty clay with low moisture content. This material had been tested previously to determine its suitability as fill material. A bulk composite sample from three borings into the dikes at the lagoon indicated that the material has a maximum dry density of 108 pounds per cubic foot (pcf) with an optimum moisture content of 15.2 percent. The soil is classified as a CL or low plasticity, silty clay. The compaction test of the composite sample is shown in Appendix A.

Prior to backfilling, the excavated lagoon bottom was completely covered with a sheet of black polyethylene to form a vapor and permeability barrier between the in-place soils and fill. Initially, the area which had been excavated to a depth of

five feet was filled and compacted in nominal six-inch lifts to bring the grade up to 2.5 feet below the original lagoon bottom.

The bottom of the lagoon was then filled uniformly with a six-inch lift of fill using the tracked loader and backhoe. Compaction was accomplished with a vibrating sheepsfoot compactor. Upon reaching the six-inch thickness as verified with the transit and rod, the first lift was tested in situ using a nuclear densitometer operated by ANCO Testing. A total of eight tests were conducted across the lift. The second, third and fourth lifts were spread, compacted, and tested in the same manner as the first lift. The average characteristics of the compaction tests are given in Table 1 and the separate test results are shown in Appendix B.

After completion of the four tested lifts of fill, the remaining dike material was spread to make the final grade while being continuously compacted and spread with the sheepsfoot unit. The final grade was brought from the high ground south of the lagoon toward the west and east sides of the lagoon. The middle area was kept slightly higher near the center of the lagoon to promote runoff west and east. The final topography of the lagoon area is shown in Figure 2. The surveyed spot elevations are shown along with the fence location which denotes the limits of the lagoon wastes.

The final layer of backfill was slightly compacted with the sheepsfoot unit but the vibrator was not used. The final cover was loosened by tractor and disc uniformly over the filled area and then fertilized and seeded with fescue. The site was then covered with straw.

The four corners of the area inside the top of the dike were re-established using the transit and tape and a six-foot high cyclone fence was constructed around the lagoon site.

Table 1. Backfill Compaction Test Summary

Lift #	Number Tests	Average Project Elevation	Average Lift Thickness	Wet Weight PCF	Average Test Results* Percent Moisture	Dry Weight PCF	Percent Compaction
1	8	94.3′	0.5′	117.7	15.3	102.1	94.54
2	8	94.8′	0.5′	121.4	15.04	92.89	97.74
3	8	95.3′	0.5′	118.5	15.43	102.64	95.05
4	8	95.8′	0.5′	118.36	16.74	101.44	93.94

* Tests performed by ANCO Testing Laboratory, Inc. with a nuclear densitometer. Previously established maximum density (108 pcf) from compaction test of a composite sample of dike material by Geotechnology, Inc.

RESULTS

The excavation was preceded by four paint filter tests on the upper soils and thin sludge layer. Based on these tests, no sludge stabilization was required prior to shipment. The general character of the upper bottom material was dark gray to gray sludge with areas of green staining. The sludge layer was generally from two to six inches thick and graded into gray-brown silty clay which was compacted and had a low moisture content.

The intermediate samples were collected as described in the closure plan and references after excavating 2.5 feet from the lagoon bottom and establishing nine 20- by 20-foot areas extending three by three from the southwest corner

The samples were collected from the middle of each area. Of the nine samples, four contained levels of TCE ranging from 7.0 to 17.07 mg/kg while the remaining five samples were below detection levels of 0.05 mg/kg of TCE. Locations of the intermediate samples are shown on Figure 3 and results are given in Table 2. The highest TCE concentration (17.07 mg/kg) was found in the south-central block.

Table 2. Southwest Lagoon
Intermediate Verification Sample Results

Sample	TCE Concentration mcg/g (ppm)
I-WC	<0.05
I-NE	<0.05
I-SW	7.09
I-EC	7.17
I-CC	7.16
I-NC	<0.05
I-SE	<0.05
I-NW	<0.05
I-SC	17.07

Sample locations are shown on Figure 3.

Based on the results of the intermediate samples, five of the blocks were then excavated an additional 2.5 feet below the original bottom. The south-central block was then sampled at depths of one, three, and five feet below the five-foot deep floor by digging a test hole with the backhoe and sampling the undisturbed sidewall. These samples, labeled FD-1, 2 and 3, indicate that low levels of TCE (see Table 3) are present in the native deep soils at or below the average water table elevation. Concentrations of TCE ranged from 1.718 to 2.313 mg/kg in the FD samples. Low levels (less than 0.171 mg/kg) of methylene chloride (MC) were also found in the FD samples. Analyses for metals and pH indicate that the FD samples are in the normal background range of total chromium, copper, and nickel and EP toxicity determinations. Soil pH values ranged from 6.77 to 7.59 and are in the range of natural values for the site.

Results of the five bottom and four dike final verification samples (Table 3) indicate that soils remaining in place are at background levels of metals and soil pH except for FSB, which has 1,095 mg/kg total chromium and 261.3 mg/kg total copper. The low EP toxicity levels for this sample indicate that these constituents are stable and not leachable. The VOC analyses of the bottom and dike verification samples indicate that only sample FCC contained more than 60 mcg/kg of TCE (115 mcg/kg). Low levels of MC and acetone were found in some samples.

The final contours on the lagoon cover were field checked on December 22, 1987. At this time, it was determined that a small area along the northeasterly limit was flat and showed very shallow ponding after a rain the previous two days. An additional area along the northwesterly limit of the cover was relatively flat and showed saturated soils. In the spring, when the soils have thawed, the cover will be re-graded such that no standing water will be allowed to exist on the cover.

Table 3. Final Verification Sample Results

Constituent	Sample FNW	FSW	FSE	FNE	FCC	FWW	FSB	FEB	FNB	FD-1	FD-2	FD-3	UNITS
Chromium (Total)	26.4	19.4	20.6	18.3	20.4	18.9	1095	50.0	15.6	18.3	18.2	13.3	mg/kg
Chromium (EP Tox)	0.012	0.020	0.009	0.012	0.017	0.009	0.014	0.011	0.008	0.034	0.05	0.046	mg/l
Copper (Total)	26.9	22.1	21.3	17.7	19.7	21.0	261.3	25.5	22.6	21.2	16.7	11.4	mg/kg
Copper (EP Tox)	0.011	0.013	0.011	0.015	0.019	0.008	0.038	0.015	0.018	0.029	0.063	0.03	mg/l
Nickel (Total)	32.0	24.2	23.1	24.6	19	37.8	37.3	32.1	34.1	22.6	19	12.7	mg/kg
Nickel (EP Tox)	0.016	0.098	0.021	0.044	0.033	0.046	<0.014	0.035	0.084	0.035	0.078	0.061	mg/l
pH	7.42	7.14	7.10	7.02	6.88	6.51	7.16	7.29	6.84	7.59	7.05	6.77	pH units
TCE	BD	46	40	<5	115	BD	E 4	BD	57	2202	1718	2313	mcg/kg
MC*	25	39	93	8.6	141	29	29	117	E 2	171	143	165	mcg/kg
Toluene	BD	BD	BD	<5	<5	BD	BD	BD	BD	5	E 4	33	mcg/kg
Acetone	276	103	287	BD	BD	71	79	BD	BD	BD	BD	BD	mcg/kg
Chloroform	BD	BD	BD	E 5	BD	BD	BD	BD	BD	BD	BD		mcg/kg

See Figure - for sample locations.
BD - Denotes below detection levels.
E - Denotes an estimated value.
* - Commonly used laboratory chemical.

DEED RECORDATION

Within 60 days, a notice will be placed into the facility deed in accordance with the requirements specified in 40 CFR 265.119(b)

DRUM STORAGE AREA

The area behind the northeast portion of the plant is a concrete slab approximately 45 feet by 50 feet. This area was used in the past to store drummed wastes. Closure of the drum storage area included removal of all pallets and equipment, followed by three cleanings of the concrete surface with a high pressure steam cleaner.

Cleaning commenced on November 11, 1987. The rinsate was collected continuously with an industrial wet vacuum cleaner mounted on a 55-gallon drum. On November 12, a second cleaning was done and fluids were collected in a drum. During the third and final cleaning, a composite sample of the rinse water was collected from three locations on the slab with a stainless steel, flat-edged scoop and placed in a 40-milliliter VOA bottle. A field blank was collected at the same time. In addition, a VOA sample was collected from the drum containing the rinse water collected during the initial cleaning.

Sample results are shown on Table 4. The rinsate from the initial and intermediate cleaning contained about 30 ppb of TCE. The final rinsate sample and field blank were below the detection limit for TCE. Based on the final sample results, the drum dtorage area was closed according to the closure plan and no residual TCE remains on the slab.

Table 4. Drum Storage Area
Verification Sample Results

Sample*	TCE Concentration (ppb)
DSA-1	<5
DSA-2	<5
DSA-3	29.57

*DSA-1 is final slab rinsate sample after final steam cleaning
*DSA-2 is a field blank collected during final cleaning
*DSA-3 is initial slab rinsate sample after first steam cleaning

Respectfully Submitted,

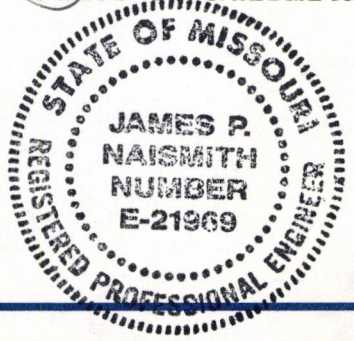
REED & ASSOCIATES, INC.

Thomas A. Carothers

Thomas A. Carothers

James P. Naismith

James P. Naismith, P.E.



FIGURES

APPENDICES

APPENDIX A

RESULTS OF COMPACTION TEST, COMPOSITE SAMPLE

GEOTECHNOLOGY, INC.

2258 Weldon Parkway • St. Louis, Missouri 63146 • (314) 997-7440

June 3, 1986

D85076.05

Reed & Associates
801 North Eleventh Street
Corpus Christi, Texas 78475

Attention: Mr. Tom Wilson

Reference: SECO Products
Washington, Missouri

Gentlemen:

Submitted herewith are results of laboratory tests requested on samples from four borings drilled in the containment pond embankment at the referenced project. Included are nine Atterberg limits and one standard Proctor test.

The borings were drilled with a hand auger on Thursday, May 29, 1986. Borings B-1, B-2, B-3 and B-4 were located in the center of the embankment on the east, south, west and north sides of the pond, respectively. The borings were backfilled with grout before we left the site.

Thank you for this assignment. Please call if you need additional information.

Very truly yours,

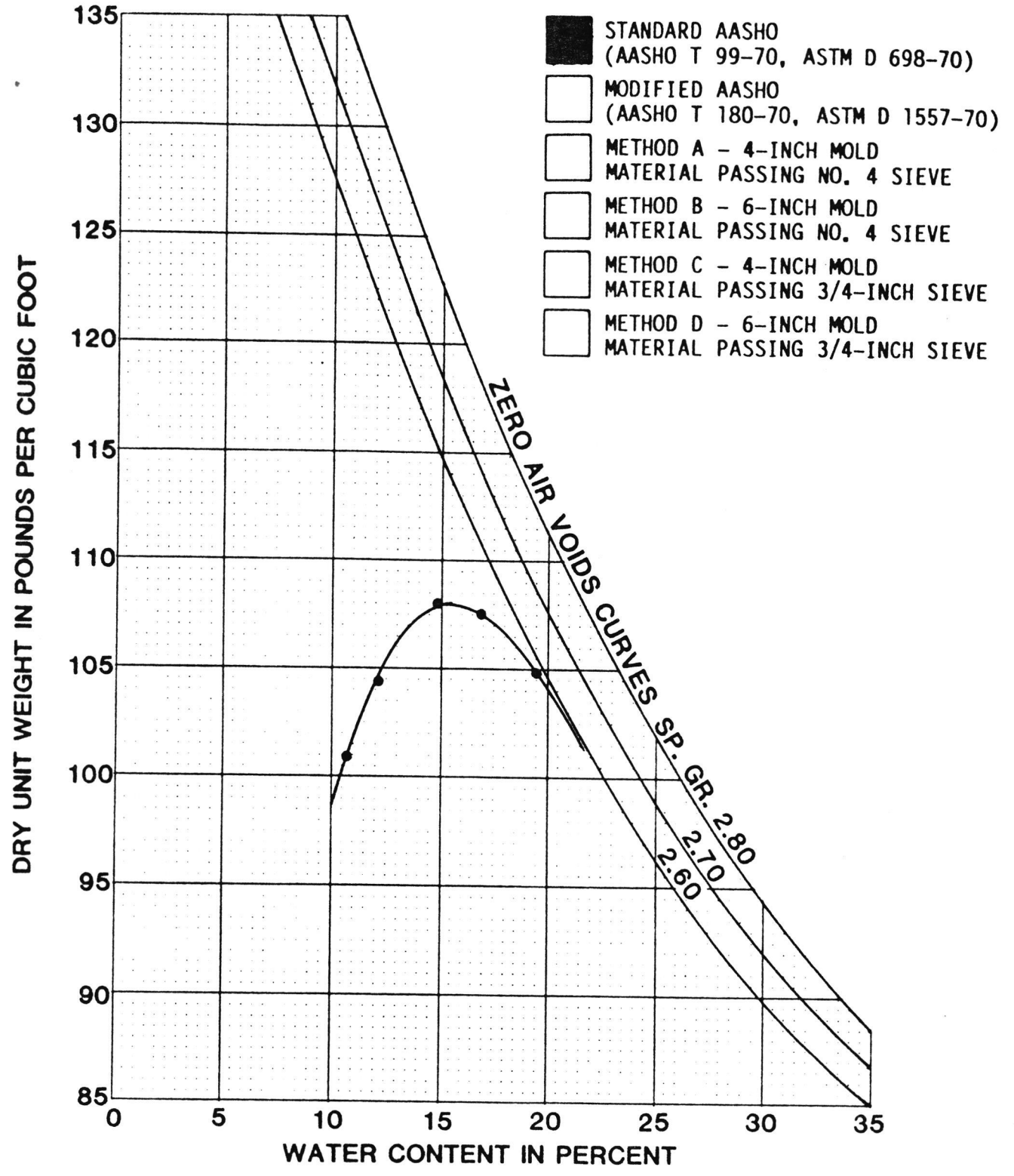
GEOTECHNOLOGY DRILLING SERVICE, INC.

John A. Baker

John A. Baker, P.E.
Vice President

JAB/sjw

D85076.05



SAMPLE	CLASSIFICATION	MAX. DRY DENSITY IN PCF	WATER CONTENT IN PERCENT	
			OPTIMUM	NATURAL
Bulk *	Brown, silty clay LL=34, PL=18, PI=16	108.0	15.2	12 to 21%

* Composite Sample from Levee Borings

SECO PRODUCTS
WASHINGTON, MISSOURI

COMPACTION TEST

GEOTECHNOLOGY
St. Louis, Missouri

PLATE

SUMMARY OF SOIL TEST RESULTS

PROJECT SECO Products

JOB NO. D85076.02 **DATE** 6/2/86

TABLE 1

Boring No.	Sample No.	Depth ft.	Classification	Water Content %	Atterberg Limits			Shear Strength		Unit Dry Weight Lb/cu ft	Consolidation	Mechanical Analysis	Remarks
					LL	PL	PI	Stress Ton/sq ft	Strain %				
1	1	1 - 1.5	CL	14	37	20	17						
	2	3 - 3.5	CL	21	41	17	24						
2	1	1 - 1.5	CL	12	33	19	14						
	2		CL	16	35	13	22						
3	1	1 - 1.5	CL	13	34	19	15						
	2	3 - 3.5	CL	17	35	20	15						
4	1	1 - 1.5	CL	12	34	14	20						
	2	3 - 3.5	CL	19	38	17	21						
Composite			CL		34	18	16						* Standard Proctor

*SEE ATTACHED CURVE SHEETS

GEOTECHNOLOGY, INC.

APPENDIX B

RESULTS OF COMPACTION TESTS

COMPACTION TESTS

IN-PLACE MATERIAL PRIOR TO BACKFILLING

ANCO TESTING LABORATORY, INC. / 1552 SOUTH 7TH, P.O. BOX 12223 ST. LOUIS, MO 63157 * 314-241-0525
2921 EAST McCARTY, JEFFERSON CITY, MO 65101 * 314-634-7070

RECEIVED 10-26-87

Report No. A-273303

October 22, 1987

Reed and Associates
708 American Bank Plaza
Corpus Christi, Texas 78475

Project: Impoundment Closure for Seco Products
Washington, Missouri

Hussmann Corporation P.O. No. 40731

Attention: Mr. Tom Carothers

Gentlemen:

We report herewith results of Degree of Compaction Tests conducted on the above project October 21, 1987.

DEGREE OF COMPACTION TESTS

Test Number	Elevation	Wet Weight Lbs./Cu.Ft.	Percent Moisture	Dry Weight Lbs./Cu.Ft.	Percent Compaction
1	2' Below Pre-Existing Grade	111.8	38.0	81.0	75.0
Location - Inside Embankment, Northwest Corner of Pond					
2	2' Below Pre-Existing Grade	104.3	34.0	77.8	72.0
Location - Inside Embankment, Southwest Quadrant					
3	2' Above Toe	110.2	29.3	85.2	78.9
Location - Inside Embankment, West Side, Center					
4	Top of Embankment	107.2	12.8	95.0	88.0
Location - West Side, Center					

Previously Established Maximum Density - 108.0 Pounds

Respectfully submitted,

John T. Anderson

John T. Anderson
ANCO TESTING LABORATORY, INC.

JTA:vlh
3-Reed and Associates/Carothers

COMPACTION TESTS

BACKFILL

ANCO TESTING LABORATORY, INC. / 1552 SOUTH 7TH, P.O. BOX 12223 ST. LOUIS, MO 63157 * 314-241-0525
2921 EAST McCARTY, JEFFERSON CITY, MO 65101 * 314-634-7070

Report No. A-273577

October 28, 1987

Reed and Associates
708 American Bank Plaza
Corpus Christi, Texas 78475

Project: Impoundment Closure for Seco Products
Washington, Missouri

Hussmann Corporation P.O. No. 40731

Attention: Mr. Tom Carothers

Gentlemen:

We report herewith results of Degree of Compaction Tests conducted on the above project October 27, 1987.

DEGREE OF COMPACTION TESTS

Test Number	Project Elevation	Wet Weight Lbs./Cu.Ft.	Percent Moisture	Dry Weight Lbs./Cu.Ft.	Percent Compaction
1	94.3	114.8	12.2	102.3	94.7
2	94.3	115.6	15.5	100.1	92.7
3	94.3	115.5	16.0	99.6	92.2
4	94.3	120.1	16.9	102.7	95.1
5	94.3	124.4	15.2	108.0	100.0
6	94.3	115.9	19.0	97.4	90.2
7	94.3	115.8	12.8	102.7	95.1
8	94.3	119.4	14.8	104.0	96.3
9	94.8	126.5	14.2	110.8	102.6
10	94.8	125.9	14.1	110.3	102.1
11	94.8	116.6	15.1	101.3	93.8
12	94.8	120.2	13.6	105.8	98.0
13	94.8	120.7	17.9	102.4	94.8
14	94.8	119.6	16.2	102.9	95.3
15	94.8	123.2	14.4	107.7	99.7

ANCO TESTING LABORATORY, INC./ 1552 SOUTH 7TH, P.O. BOX 12223 ST. LOUIS, MO 63157 • 314-241-0525
2921 EAST McCARTY, JEFFERSON CITY, MO 65101 • 314-634-7070

DEGREE OF COMPACTION TESTS

Test Number	Project Elevation	Wet Weight Lbs./Cu.Ft.	Percent Moisture	Dry Weight Lbs./Cu.Ft.	Percent Compaction
16	94.8	118.5	14.8	103.2	95.6
17	95.3	121.2	14.6	105.8	98.0
18	95.3	115.3	14.7	100.5	93.1
19	95.3	119.7	15.3	103.8	96.1
20	95.3	121.2	15.1	105.3	97.5
21	95.3	119.3	15.9	102.9	95.3
22	95.3	116.2	17.5	98.9	91.6
23	95.3	120.5	16.1	103.8	96.1
24	95.3	114.3	14.2	100.1	92.7

Note: See attached sketch for test locations

Maximum Density - 108.0 Pounds

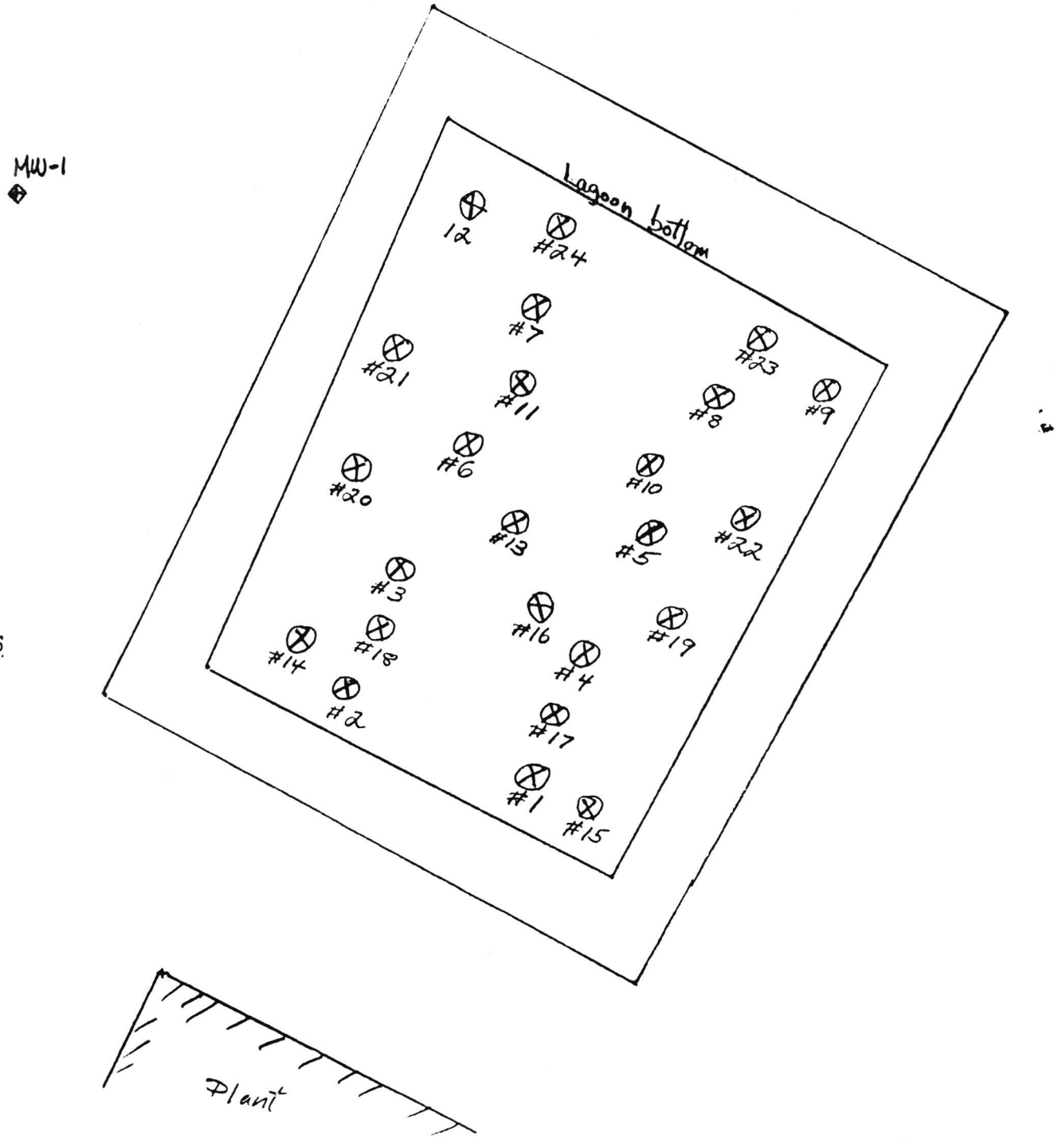
Respectfully submitted,

John T. Anderson
ANCO TESTING LABORATORY, INC.

JTA:vlh
3-Reed and Associates/Carothers

Report No. A-273577

HUSSMANN-SECO PRODUCTS
LAGOON CLOSURE
Washington, Missouri



ANCO TESTING LABORATORY, INC. / 1552 SOUTH 7TH, P.O. BOX 12223 ST. LOUIS, MO 63157 • 314-241-0525
2921 EAST McCARTY, JEFFERSON CITY, MO 65101 • 314-634-7070

Report No. A-273641

October 29, 1987

Reed and Associates
708 American Bank Plaza
Corpus Christi, Texas 78475

Project: Impoundment Closure for Seco Products
Washington, Missouri

Hussmann Corporation P.O. No. 40731

Attention: Mr. Tom Carothers

Gentlemen:

We report herewith results of Degree of Compaction Tests conducted on the above project October 28, 1987.

DEGREE OF COMPACTION TESTS

Test Number	Project Elevation	Wet Weight Lbs./Cu.Ft.	Percent Moisture	Dry Weight Lbs./Cu.Ft.	Percent Compaction
25	95.8	119.3	19.1	100.2	92.8
26	95.8	118.7	15.6	102.7	95.1
27	95.8	118.2	17.6	100.5	93.1
28	95.8	116.8	15.8	100.9	93.4
29	95.8	116.3	19.5	97.3	90.1
30	95.8	121.0	13.0	107.1	99.2
31	95.8	121.7	16.9	104.1	96.4
32	95.8	114.9	16.4	98.7	91.4

Note: See attached sketch for test locations

Maximum Density - 108.0 Pounds

Respectfully submitted,

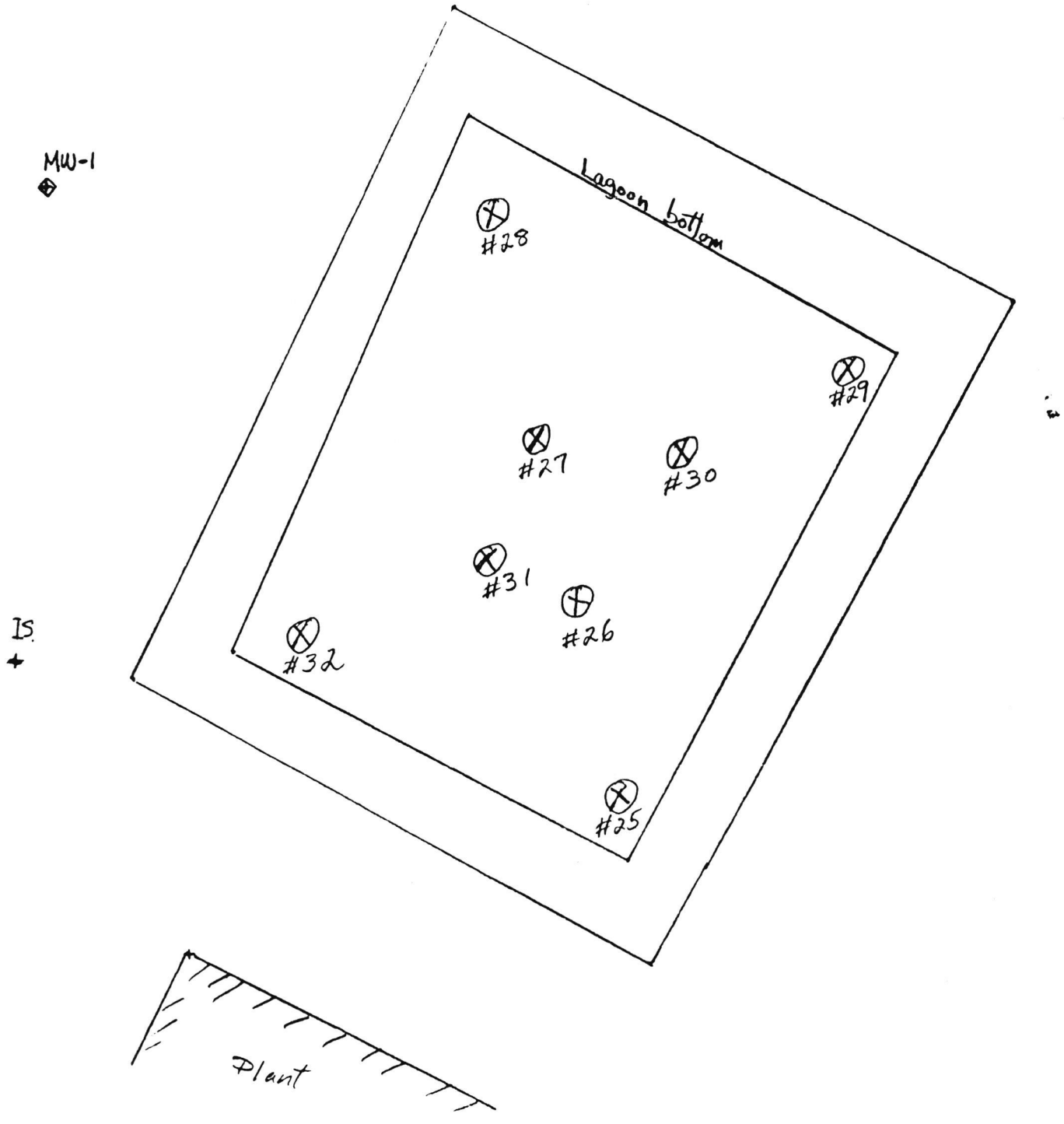
John T. Anderson

John T. Anderson
ANCO TESTING LABORATORY, INC.

JTA:vlh
3-Reed and Associates/Carothers

Report No. A-273641

HUSSMANN-SECO PRODUCTS
LAGOON CLOSURE
Washington, Missouri



APPENDIX C

LABORATORY ANALYSES

ANALYTICAL RESULTS

INTERMEDIATE VERIFICATION SAMPLES

metaTRACE, Inc. ■ 13715 Rider Trail North ■ Earth City, MO 63045 ■ (314) 298-8566

metaTRACE, INC.
13715 RIDER TRAIL NORTH
EARTH CITY, MO 63045

PROJECT: 1004-01
CLIENT: HUSSMANN
DATE: 10/19/87

SITE I.D.	LAB #	SAMPLE DATE	PARAMETER	CONC.	UNITS	DATE ANALY.
I-WC	AA04768	10/16/87	TRICHLOROETHENE	<.05	ug/g	10/18/87
I-NE	AA04769	10/16/87	TRICHLOROETHENE	<.05	ug/g	10/18/87
I-SW	AA04770	10/16/87	TRICHLOROETHENE	7.09	ug/g	10/18/87
I-EC	AA04771	10/16/87	TRICHLOROETHENE	7.17	ug/g	10/18/87
I-CC	AA04772	10/16/87	TRICHLOROETHENE	7.16	ug/g	10/18/87
I-NC	AA04773	10/16/87	TRICHLOROETHENE	<.05	ug/g	10/18/87
I-SE	AA04774	10/16/87	TRICHLOROETHENE	<.05	ug/g	10/18/87
I-NW	AA04775	10/16/87	TRICHLOROETHENE	<.05	ug/g	10/18/87
I-SC	AA04776	10/16/87	TRICHLOROETHENE	17.07	ug/g	10/18/87

ANALYTICAL RESULTS

FINAL VERIFICATION SAMPLES

metaTRACE, Inc. ■ 13715 Rider Trail North ■ Earth City, MO 63045 ■ (314) 298-8566

metaTRACE, INC.
13715 RIDER TRAIL NORTH
EARTH CITY, MO 63045

PROJECT: 104-01
CLIENT: HUGGMANN/SECO
DATE: 10/30/87

SITE I.D.	LAB #	SAMPLE DATE	PARAMETER	CONC.	UNITS	DATE ANALY.
FNW	AA04815	10/21/87	pH	7.40	pH units	10/23/87
			CHROMIUM (eptox)	.012	mg/l	10/30/87
			CHROMIUM (total)	26.4	mg/kg	10/26/87
			COPPER (eptox)	.011	mg/l	10/30/87
			COPPER (total)	26.9	mg/kg	10/26/87
			NICKEL (eptox)	.016	mg/l	10/30/87
			NICKEL (total)	32.0	mg/kg	10/26/87
FSW	AA04816	10/21/87	pH	7.14	pH units	10/23/87
			CHROMIUM (eptox)	.020	mg/l	10/30/87
			CHROMIUM (total)	19.4	mg/kg	10/26/87
			COPPER (eptox)	.013	mg/l	10/30/87
			COPPER (total)	22.1	mg/kg	10/26/87
			NICKEL (eptox)	.098	mg/l	10/30/87
			NICKEL (total)	24.2	mg/kg	10/26/87
FSE	AA04817	10/21/87	pH	7.10	pH units	10/23/87
			CHROMIUM (eptox)	.009	mg/l	10/30/87
			CHROMIUM (total)	20.6	mg/kg	10/26/87
			COPPER (eptox)	.011	mg/l	10/30/87
			COPPER (total)	21.3	mg/kg	10/26/87
			NICKEL (eptox)	.021	mg/l	10/30/87
			NICKEL (total)	23.1	mg/kg	10/26/87
FNW	AA04818	10/21/87	pH	6.51	pH units	10/23/87
			CHROMIUM (eptox)	.009	mg/l	10/30/87
			CHROMIUM (total)	16.7	mg/kg	10/26/87
			COPPER (eptox)	.008	mg/l	10/30/87
			COPPER (total)	21.0	mg/kg	10/26/87
			NICKEL (eptox)	.048	mg/l	10/30/87
			NICKEL (total)	37.8	mg/kg	10/26/87
FSE	AA04819	10/21/87	pH	7.16	pH units	10/23/87
			CHROMIUM (eptox)	.014	mg/l	10/30/87
			CHROMIUM (total)	1095	mg/kg	10/26/87
			COPPER (eptox)	.038	mg/l	10/30/87
			COPPER (total)	261.3	mg/kg	10/26/87
			NICKEL (eptox)	< .014	mg/l	10/30/87
			NICKEL (total)	37.3	mg/kg	10/25/87

SAMPLE I.D.	DETECTION	METHOD	FNW	FSE	FSB	METHOD	FSW	FWW
metaTRACE #	LIMIT	BLANK	AA04815	AA04817	AA04819	BLANK	AA04816	AA04818
DATE ANALYZED		10/22/87	10/22/87	10/22/87	10/22/87	10/21/87	10/21/87	10/21/87
DILUTION		1.0	1.0	1.0	1.0	1.0	1.0	1.0
% MOISTURE		----	----	----	----	----	31.56	16.25
METHOD		8240	8240	8240	8240	8240	8240	8240
UNITS	UG/KG	UG/L	UG/KG	UG/KG	UG/KG	UG/L	UG/KG	UG/KG

VOLATILE ORGANIC COMPOUNDS

Acetone	<	10	45	276	267	79	26	103	71
Acrolein	<	100	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Acrylonitrile	<	100	2J	B.D.L.	B.D.L.	B.D.L.	4J	B.D.L.	B.D.L.
Benzene	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Bromodichloromethane	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Bromoform	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Bromomethane	<	10	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Carbon Tetrachloride	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Chlorobenzene	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Chloroethane	<	10	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
2-Chloroethylvinyl Ether	<	10	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Chloroform	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Chloromethane	<	10	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Dibromochloromethane	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
1,1-Dichloroethane	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
1,2-Dichloroethane	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
1,1-Dichloroethene	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
trans-1,2-Dichloroethene	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
1,2-Dichloropropane	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
cis-1,3-Dichloropropene	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
trans-1,3-Dichloropropene	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Ethylbenzene	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Methylene Chloride	<	5	3J	25	93	29	B.D.L.	39	29
1,1,2,2-Tetrachloroethane	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Tetrachloroethene	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Toluene	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
1,1,1-Trichloroethane	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
1,1,2-Trichloroethane	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Trichloroethene	<	5	B.D.L.	B.D.L.	40	4J	B.D.L.	46	B.D.L.
Trichlorofluoromethane	<	5	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
Vinyl Chloride	<	10	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.
1,2-Dichloroethane-d4			109	104	102	108	104	120	116
Toluene-d8			88	87	88	90	105	116	116
Bromofluorobenzene			90	90	90	91	105	109	105

B - DENOTES THE ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE
J - DENOTES AN ESTIMATED VALUE
B.D.L. - DENOTES BELOW DETECTION LIMIT
SURROGATES REPORTED AS % RECOVERIES

metaTRACE, Inc. ■ 13715 Rider Trail North ■ Earth City, MO 63045 ■ (314) 298-8566

metaTRACE, INC.
13715 RIDER TRAIL NORTH
EARTH CITY, MO 63045

PROJECT: 104-01
CLIENT: HUSSMANN/SECO
DATE: 11/19/87

SITE I.D.	LAB #	SAMPLE DATE	PARAMETER	CONC.	UNITS	DATE ANALY.
FNE, 3450	AA04959	10/26/87	pH	7.02	pH units	10/27/87
			CHROMIUM (eptox)	0.012	mg/L	11/18/87
			CHROMIUM (total)	18.3	mg/kg	11/18/87
			COPPER (eptox)	0.015	mg/L	11/18/87
			COPPER (total)	17.7	mg/kg	11/18/87
			NICKEL (eptox)	0.044	mg/L	11/18/87
			NICKEL (total)	24.6	mg/kg	11/18/87
FNB, 3451	AA04960	10/26/87	pH	6.84	pH units	10/27/87
			CHROMIUM (eptox)	0.008	mg/L	11/18/87
			CHROMIUM (total)	15.6	mg/kg	11/18/87
			COPPER (eptox)	0.018	mg/L	11/18/87
			COPPER (total)	22.6	mg/kg	11/18/87
			NICKEL (eptox)	0.084	mg/L	11/18/87
			NICKEL (total)	34.1	mg/kg	11/18/87
FEB, 3452	AA04961	10/26/87	pH	7.29	pH units	10/27/87
			CHROMIUM (eptox)	0.011	mg/L	11/18/87
			CHROMIUM (total)	50	mg/kg	11/18/87
			COPPER (eptox)	0.015	mg/L	11/18/87
			COPPER (total)	25.5	mg/kg	11/18/87
			NICKEL (eptox)	0.035	mg/L	11/18/87
			NICKEL (total)	32.1	mg/kg	11/18/87

metaTRACE, Inc. ■ 13715 Rider Trail North ■ Earth City, MO 63045 ■ (314) 298-8566

SAMPLE I.D.	BLANK	FNE, 3450	FNB,3451	FEB,3452
metaTRACE #	>C1625	AA04959	AA04960	AA04961
DATE ANLALYZED	11/9-10/87	11/19/87	11/9-10/87	11/9-10/87
DILUTION	1.0	1.0	5.2	4.8
% MOISTURE	----	23.6	17.65	20.73
METHOD	8240	8240	8240	624
UNITS	UG/KG	UG/KG	UG/KG	UG/KG

VOLATILE ORGANIC COMPOUNDS

Acrolein	< 100	< 100	< 100	< 100
Acrylonitrile	< 100	< 100	< 100	< 100
Benzene	< 5	< 5	< 5	< 5
Bromodichloromethane	< 5	< 5	< 5	< 5
Bromoform	< 5	< 5	< 5	< 5
Bromomethane	< 10	< 10	< 10	< 10
Carbon Tetrachloride	< 5	< 5	< 5	< 5
Chlorobenzene	< 5	< 5	< 5	< 5
Chloroethane	< 10	< 10	< 10	< 10
2-Chloroethylvinyl Ether	< 10	< 10	< 10	< 10
Chloroform	< 5	5 J	< 5	< 5
Chloromethane	< 10	< 10	< 10	< 10
Dibromochloromethane	< 5	< 5	< 5	< 5
1,1-Dichloroethane	< 5	< 5	< 5	< 5
1,2-Dichloroethane	< 5	< 5	< 5	< 5
1,1-Dichloroethene	< 5	< 5	< 5	< 5
trans-1,2-Dichloroethene	< 5	< 5	< 5	< 5
1,2-Dichloropropane	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	< 5	< 5	< 5	< 5
trans-1,3-Dichloropropene	< 5	< 5	< 5	< 5
Ethylbenzene	< 5	< 5	< 5	< 5
Methylene Chloride	4.53 J	8.6	< 2 J	117
1,1,2,2-Tetrachloroethane	< 5	< 5	< 5	< 5
Tetrachloroethene	< 5	< 5	< 5	< 5
Toluene	< 1.44 J	< 5	< 5	< 5
1,1,1-Trichloroethane	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	< 5	< 5	< 5	< 5
Trichloroethene	< 5	< 5	< 57	< 5
Trichloromonofluoromethane	< 5	< 5	< 5	< 5
Vinyl Chloride	< 10	< 10	< 10	< 10
1,2-Dichloroethane-d4*	108	108	113	108
Toluene-d8*	93	108	91	94
Bromofluorobenzene*	97	109	94	95

*DENOTES SURROGATE COMPOUND AND CORRESPONDING PERCENT RECOVERY
B - DENOTES THE ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE
J - DENOTES AN ESTIMATED VALUE

metaTRACE, Inc. ■ 13715 Rider Trail North ■ Earth City, MO 63045 ■ (314) 298-8566

metaTRACE, INC.
13715 RIDER TRAIL NORTH
EARTH CITY, MO 63045

PROJECT: 104-01
CLIENT: HUSSMANN/SECO
DATE: 11/19/87

SITE I.D.	LAB #	SAMPLE DATE	PARAMETER	CONC.	UNITS	DATE ANALY.
FD-1, 3446	AA04955	10/26/87	pH	7.59	pH units	10/27/87
			CHROMIUM (eptox)	0.034	mg/L	11/18/87
			CHROMIUM (total)	18.3	mg/kg	11/18/87
			COPPER (eptox)	0.029	mg/L	11/18/87
			COPPER (total)	21.2	mg/kg	11/18/87
			NICKEL (eptox)	0.035	mg/L	11/18/87
			NICKEL (total)	22.6	mg/kg	11/18/87
FD-2, 3447	AA04956	10/26/87	pH	7.05	pH units	10/27/87
			CHROMIUM (eptox)	0.05	mg/L	11/18/87
			CHROMIUM (total)	18.2	mg/kg	11/18/87
			COPPER (eptox)	0.063	mg/L	11/18/87
			COPPER (total)	16.7	mg/kg	11/18/87
			NICKEL (eptox)	0.078	mg/L	11/18/87
			NICKEL (total)	19	mg/kg	11/18/87
FD-3, 3448	AA04957	10/26/87	pH	6.77	pH units	10/27/87
			CHROMIUM (eptox)	0.046	mg/L	11/18/87
			CHROMIUM (total)	13.3	mg/kg	11/18/87
			COPPER (eptox)	0.03	mg/L	11/18/87
			COPPER (total)	11.4	mg/kg	11/18/87
			NICKEL (eptox)	0.061	mg/L	11/18/87
			NICKEL (total)	12.7	mg/kg	11/18/87
FDC, 3449	AA04958	10/26/87	pH	6.88	pH units	10/27/87
			CHROMIUM (eptox)	0.017	mg/L	11/18/87
			CHROMIUM (total)	20.4	mg/kg	11/18/87
			COPPER (eptox)	0.019	mg/L	11/18/87
			COPPER (total)	19.7	mg/kg	11/18/87
			NICKEL (eptox)	0.033	mg/L	11/18/87
			NICKEL (total)	19	mg/kg	11/18/87

metaTRACE, Inc. ■ 13715 Rider Trail North ■ Earth City, MO 63045 ■ (314) 298-8566

SAMPLE I.D.	BLANK	FD-1,3446	FD-2,3447	FD-3,3448	FDD,3449
metaTRACE #	>C1606	AA04955	AA04956	AA04957	AA04958
DATE ANLALYZED	11/9-10/87	11/9-10/87	11/9-10/87	11/9-10/87	11/9-10/87
DILUTION	1.0	4.8	4.4	4.7	1.0
% MOISTURE	----	29.24	25.39	24.10	27.0
METHOD	8240	8240	8240	8240	8240
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG

VOLATILE ORGANIC COMPOUNDS

Acrolein	< 100	< 100	< 100	< 100	< 100
Acrylonitrile	< 100	< 100	< 100	< 100	< 100
Benzene	< 5	< 5	< 5	< 5	< 5
Bromodichloromethane	< 5	< 5	< 5	< 5	< 5
Bromoform	< 5	< 5	< 5	< 5	< 5
Bromomethane	< 10	< 10	< 10	< 10	< 10
Carbon Tetrachloride	< 5	< 5	< 5	< 5	< 5
Chlorobenzene	< 5	< 5	< 5	< 5	< 5
Chloroethane	< 10	< 10	< 10	< 10	< 10
2-Chloroethylvinyl Ether	< 10	< 10	< 10	< 10	< 10
Chloroform	< 5	< 5	< 5	< 5	< 5
Chloromethane	< 10	< 10	< 10	< 10	< 10
Dibromochloromethane	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethane	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethene	< 5	< 5	< 5	< 5	< 5
trans-1,2-Dichloroethene	< 5	< 5	< 5	< 5	< 5
1,2-Dichloropropane	< 5	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	< 5	< 5	< 5	< 5	< 5
trans-1,3-Dichloropropene	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	< 5	< 5	< 5	< 5	< 5
Methylene Chloride	< 5	171	143	165	141
1,1,2,2-Tetrachloroethane	< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	< 5	< 5	< 5	< 5	< 5
Toluene	< 5	5	4 J	33	< 5
1,1,1-Trichloroethane	< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	< 5	< 5	< 5	< 5	< 5
Trichloroethene	< 5	2202	1718	2313	115
Trichloromonofluoromethane	< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	< 10	< 10	< 10	< 10	< 10
1,2-Dichloroethane-d4*	96	108	110	107	105
Toluene-d8*	100	94	93	92	102
Bromofluorobenzene*	101	108	92	92	100

*DENOTES SURROGATE COMPOUND AND CORRESPONDING PERCENT RECOVERY
B - DENOTES THE ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE
J - DENOTES AN ESTIMATED VALUE

ANALYTICAL RESULTS

DRUM STORAGE AREA

metaTRACE, Inc. ■ 13715 Rider Trail North ■ Earth City, MO 63045 ■ (314) 298-8566

metaTRACE, INC
13715 RIDER TRAIL NORTH
EARTH CITY, MO 63045

PROJECT: 104-01 J
CLIENT: HUSSMANN/SECO
DATE: 11/16/87

SAMPLE I.D.	SAMPLE NO.	COMPOUND NAME	CONC	UNITS	DATE ANALYZED
DSA-1	AA05536	TCE	< 5	ppb	11/13/87
DSA-2	AA05537	TCE	< 5	ppb	11/13/87
DSA-3	AA05538	TCE	29.57	ppb	11/13/87
	BLANK	TCE	< 5	ppb	11/13/87

FEDERAL EXPRESS®

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL NUMBER 6087744401

1274N 6087744401

Date 1/26/88

1 From (Your Name) Please Print: V. Steve Reed

Your Phone Number (Very Important): (512) 883-1353

Company: REED & ASSOCIATES INC

Department/Floor No.:

Street Address: 708 AMERICAN BANK PLAZA

City: CORPUS CHRISTI State: TX ZIP Required For Correct Invoicing: 78475

2 To (Recipient's Name) Please Print: Mr. Morris Kay

Recipient's Phone Number (Very Important): (913) 236-2891

Company: U.S. Environmental Protection Agency VII

Department/Floor No.:

Exact Street Address *(Use of P.O. Boxes or P.O. ® Zip Codes Will Delay Delivery And Result in Extra Charge.)*: 726 Minnesota Avenue

City: Kansas City State: KS ZIP Street Address Zip Required: 66101

3 YOUR BILLING REFERENCE INFORMATION (FIRST 24 CHARACTERS WILL APPEAR ON INVOICE.)

Hussmann Seco

PAYMENT [X] Bill Sender [ ] Bill Recipient's FedEx Acct. No. [ ] Bill 3rd Party FedEx Acct. No. [ ] Bill Credit Card [ ] Cash

4 SERVICES CHECK ONLY ONE BOX

1 [ ] **PRIORITY 1** Overnight Delivery Using Your Packaging

6 [ ] **OVERNIGHT LETTER*** (Our Packaging) 9½"x12½"

OVERNIGHT DELIVERY USING OUR PACKAGING

2 [X] Courier-Pak Overnight Envelope* 12"x 15½"

3 [ ] Overnight Box 12½"x 17½"x 3" A [ ]

4 [ ] Overnight Tube 38"x 6"x 6" B [ ]

*Declared Value Limit $100.

5 [ ] **STANDARD AIR** Delivery not later than second business day

SERVICE COMMITMENT

PRIORITY 1 - Delivery is scheduled early next business morning in most locations. It may take two or more business days if the destination is outside our primary service areas.

STANDARD AIR - Delivery is generally next business day or not later than second business day. It may take three or more business days if the destination is outside our primary service areas.

DELIVERY AND SPECIAL HANDLING CHECK SERVICES REQUIRED

1 [ ] **HOLD FOR PICK-UP** (Fill in Section H at right)

2 [X] **DELIVER WEEKDAY**

3 **DELIVER SATURDAY** (Extra charge) [ ]

4 [ ] **DANGEROUS GOODS** (P-1 and Standard Air Packages only. Extra charge)

5 [ ] **CONSTANT SURVEILLANCE SERVICE (CSS)** (Extra charge) (Do Not Complete Section 5)

6 [ ] **DRY ICE** _____ Lbs.

7 [ ] **OTHER SPECIAL SERVICE** _____

8 [ ]

9 [ ] **SATURDAY PICK-UP** (Extra charge)

10 [ ]

PACKAGES	WEIGHT	YOUR DECLARED VALUE	OVER SIZE
1	LBS		
	LBS		
	LBS		
	LBS		
Total	Total	Total	

Received At
1 ☐ Regular Stop
2 ☐ On-Call Stop
3 ☐ Drop Box 4 ☐ B.S.C. 5 ☐ Station

Federal Express Corp. Employee No.:

Date/Time For Federal Express Use: 1/26/88

5 Sender authorizes Federal Express to deliver this shipment without obtaining a delivery signature and shall indemnify and hold harmless Federal Express from any claims resulting therefrom.

Release Signature:

H HOLD FOR PICK-UP AT THIS FEDERAL EXPRESS LOCATION:

Street Address (See Service Guide or Call 800-238-5355)

City State

ZIP ® Zip Code of Street Address Required

Emp. No. Date

[ ] Cash Received

[ ] Return Shipment

[ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold

Street Address

City State Zip

Received By: X

Date/Time Received FedEx Employee Number

Federal Express Use

Base Charges

Declared Value Charge

Origin Agent Charge

Other

Total Charges

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007

RECIPIENT'S COPY

TN MN

0 20' 40'
SCALE

MW-4

MW-1

A

B

C

SAND FILTER

PLANT

LEGEND

A 1.0'

B 2.5'

C 5.0'

HUSSMANN - SECO

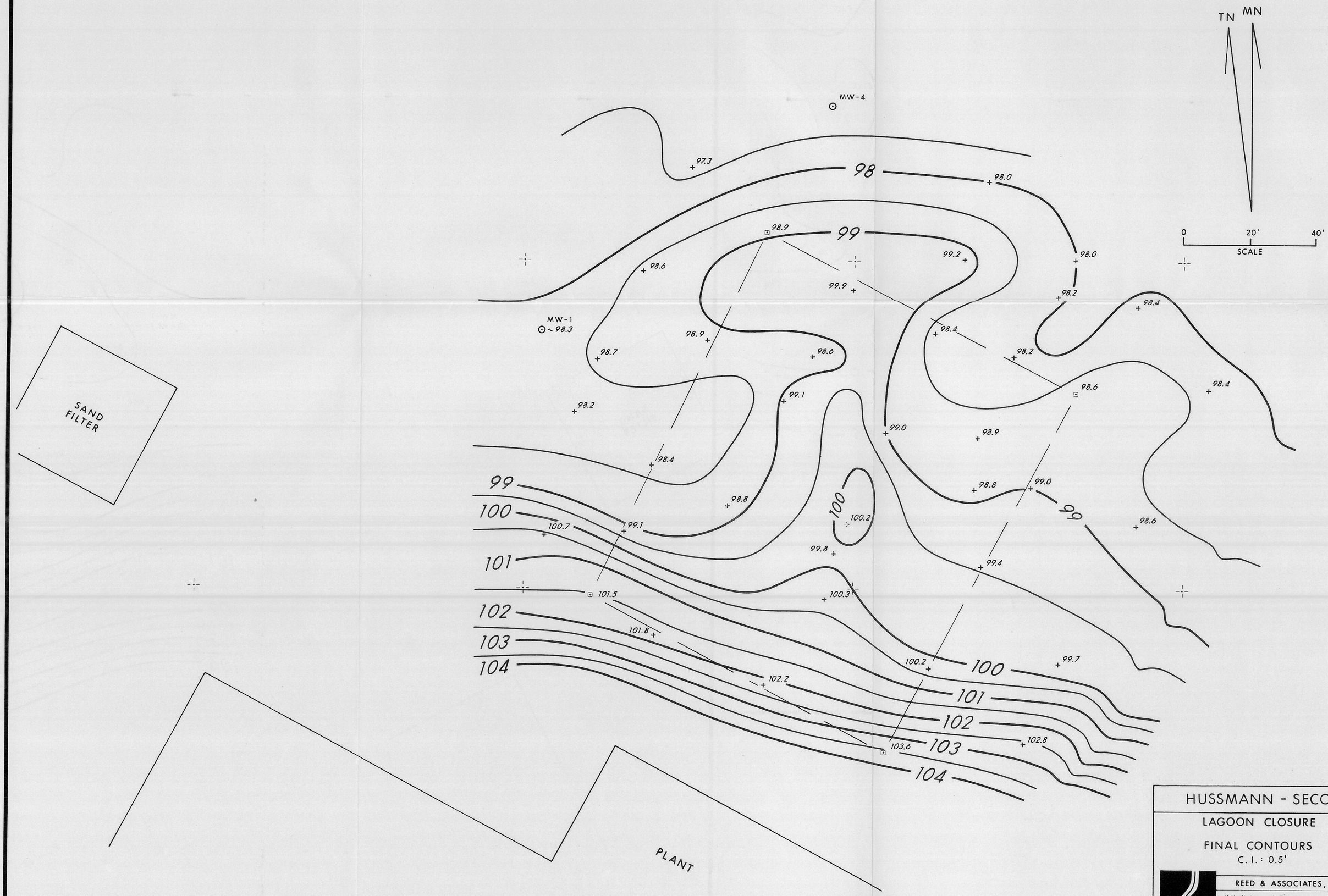
LAGOON CLOSURE

EXCAVATION DEPTHS

REED & ASSOCIATES, INC.

Hydrologists and Environmental Consultants
AUSTIN • CORPUS CHRISTI • MIDLAND

Date: Jan. 1988 Figure: 1



HUSSMANN - SECO

LAGOON CLOSURE

FINAL CONTOURS

C. I. : 0.5'

REED & ASSOCIATES, INC.

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AUSTIN • CORPUS CHRISTI • MIDLAND

Date : Jan. 1988 Figure: 2

TN MN

0 20' 40'
SCALE

MW-4

MW-1

NW

COMPOSITED

FNB

INNER TOP OF DIKE

FNB

INNER LAGOON BOTTOM

FNW

FWW

PNW

COMPOSITED

NE

INW

PNE

FNE

FWW

INC

FCC

FEB

IWC

INE

PSW

ICC

COMPOSITED

FEB

FSW

ISW

IEC

SW

FD3

FD2

FD1

ISC

PSE

ISE

FSE

FSB

FSB

SE

COMPOSITED

SAND FILTER

PLANT

LEGEND

FSW FINAL VERIFICATION SAMPLE LOCATION

INE INTERMEDIATE VERIFICATION LOCATION

* PAINT FILTER TEST LOCATION

HUSSMANN - SECO

LAGOON CLOSURE

SAMPLE LOCATION MAP

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Date : Jan. 1988 Figure : 3

Cadmium	4900 ppb	outfall 001 - Alluvial fan
Chromium	5,000,000 ppb	pot. waste deposition area
mercury	390 ppb 300	Dubois Creek - Upstream outfall 002
lead	700,000 ppb	former exhaust conduit location
nickel	2,000,000 ppb	" " " location
barium	2,700,000ppb	pot. waste deposition area